

WHAT IS CLAIMED IS:

1 1. An apparatus comprising:
2 a first integrated circuit mounted in a first package, the first package having a first set
3 of electrical contacts and a first connector; and
4 a second integrated circuit mounted in a second package, the second package having a
5 second set of electrical contacts and a second connector, the second connector
6 being electrically and physically coupled to the first connector, the first and
7 second connectors being mating connectors.

1 2. The apparatus as recited in claim 1 wherein the first set of electrical contacts
2 are disposed on a first surface of the package and the first connector is disposed on a second
3 surface of the package.

1 3. The apparatus as recited in claim 2 wherein the second set of electrical
2 contacts and the second connector are disposed on a same surface of the second package.

1 4. The apparatus as recited in claim 3 wherein the second set of electrical
2 contacts are coupled to a printed circuit board through an intermediate connector.

1 5. The apparatus as recited in claim 4 wherein the intermediate connector is a
2 socket.

1 6. The apparatus as recited in claim 1 wherein the first and second connectors are
2 male/female connectors.

1 7. The apparatus as recited in claim 1 wherein the first and second mating
2 connectors are electrically coupled via press fit connections.

1 8. The apparatus as recited in claim 1 wherein the first and second connectors
2 are removably coupled.

1 9. The apparatus as recited in claim 1 wherein high speed signals are routed over
2 the first and second connectors and wherein power, ground and slower speed signals are
3 routed over the first set of electrical contacts.

1 10. The apparatus as recited in claim 1 wherein power, ground and slower speed
2 signals are routed over the second set of electrical contacts.

1 11. The apparatus as recited in claim 1 wherein one of the first and second
2 integrated circuits is a microprocessor.

1 12. The apparatus as recited in claim 1 wherein the first set of electrical contacts
2 are formed by one of solder balls, lands, pins, and wires.

1 13. The apparatus as recited in claim 1 wherein the first and second connectors
2 carry signals for a standard microprocessor interface between the first and second integrated
3 circuits.

1 14. The apparatus as recited in claim 1 wherein the first and second connectors are
2 slidably engaged.

1 15. A method comprising:
2 electrically coupling a first integrated circuit mounted in a first package through a first
3 set of electrical connectors to a printed circuit board; and
4 electrically connecting the first integrated circuit through a first package connector to
5 a second integrated circuit mounted in a second package having a second
6 package connector, wherein the first and second package connectors are
7 mating connectors.

1 16. The method as recited in claim 15 wherein the second package is electrically
2 coupled to the printed circuit board.

1 17. The method as recited in claim 15 wherein the first and second package
2 connectors are slidably engaged.

1 18. The method as recited in claim 15 wherein the second package connector is
2 electrically coupled to the first package connector via a solderless connection.

1 19. The method as recited in claim 15 further comprising sending high speed
2 signals over the first package connector and sending lower speed signals over the first set of
3 electrical connectors.

1 20. An integrated circuit assembly comprising:
2 first means for electrically coupling a packaged integrated circuit to a printed circuit
3 board;
4 second means for directly electrically coupling the packaged integrated circuit to a
5 second packaged integrated circuit without coupling through a printed circuit
6 board.

1 21. The integrated circuit assembly as recited in claim 20 wherein the first and
2 second means are located on a first surface of the packaged integrated circuit.

1 22. The integrated circuit assembly as recited in claim 20 wherein the first and
2 second means are located respectfully on a first and second surface of the packaged
3 integrated circuit.

1 23. The integrated circuit assembly as recited in claim 20 wherein the second
2 means for directly electrically coupling couples standard interface signals between the first
3 and second packaged integrated circuit.

1 24. A package assembly including an integrated circuit package for an integrated
2 circuit die, comprising:
3 a first set of electrical contacts for coupling to a printed circuit board; and

4 a connector disposed on a surface of the package for coupling to a mating connector
5 on another integrated circuit package.

1 25. The package assembly as recited in claim 24 wherein the first set of electrical
2 contacts and the connector are mounted on a bottom surface of the integrated circuit package.

1 26. The package assembly as recited in claim 24 wherein the first set of electrical
2 contacts and the connector are mounted on opposite surfaces of the integrated circuit
3 package.

1 27. The package assembly as recited in claim 24 wherein the first set of electrical
2 contacts couple to the printed circuit board through a socket.